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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/827,455

04/19/2004

Arun Prakash

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12/17/2004

E I DU PONT DE NEMOURS AND COMPANY
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EXAMINER

STAFIRA, MICHAEL PATRICK

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/827,455	PRAKASH ET AL.	
	Examiner	Art Unit	
	Michael P. Stafira	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**: 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 51 and 52 is/are allowed.
- 6) ☒ Claim(s) 1-4, 16-23, 25-27, 40-42 and 44 is/are rejected.
- 7) ☒ Claim(s) 5-15, 24, 28-39, 43 and 45-50 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/19/04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 16-23, 25-27, 40-42, 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al. ('334) in view of Nakazono ('642).

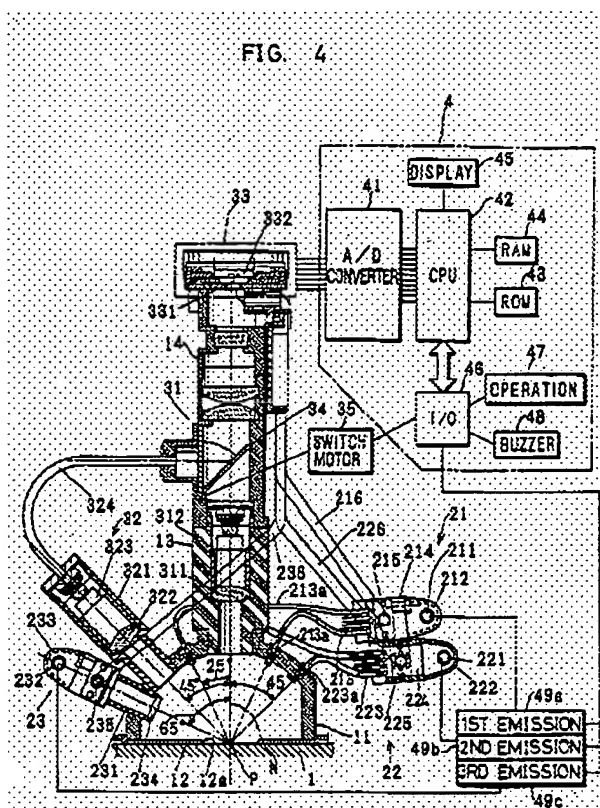
Claim 1

Yamaguchi et al. ('334) discloses means for positioning said device (Fig. 4, Ref. 31) over said target coating (Fig. 4, Ref. 1); means for producing one beam of light (Fig. 4, Ref. 211) at one preset intensities; means for imaging (Fig. 4, Ref. 33); means for directing said beams (Fig. 4, Ref. 231a) of light towards a target portion of said target coating (Fig. 4, Ref. 1); means for directing a reflection (Fig. 4, Ref. 34) of said target portion to a photosensitive surface (Fig. 4, Ref. 332) located in said means for imaging to capture a target image of said portion (Fig. 4, Ref. 33); means for measuring characteristics of said metallic flakes in said target image at said preset intensity (Fig. 4, Ref. 42); and means for displaying (Fig. 4, Ref. 45) said identified one or more known metal flakes that match said characteristics of said unknown metallic flakes (Col. 11, lines 42-49).

Yamaguchi et al. ('334) substantially teaches the claimed invention except that it does not show an means for correlating the characteristics of the unknown metallic flakes in the target image to stored known metallic flakes at the preset intensity that match characteristics of the

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unknown metallic flakes. Nakazono ('642) shows that it is known to provide means for correlating said characteristics of said unknown metallic flakes in said target image to stored characteristics of known metallic flakes at said preset intensity to identify one or more said known metal flakes that match said characteristics of said unknown metallic flakes (Col. 5, lines 16-65) for a method of determining color tone of a coating. It would have been obvious to combine the device of Yamaguchi et al. ('334) with the means of correlating of Nakazono ('642) for the purpose of providing a ratio that can be compared to a reference, therefore increasing the accuracy of the measurement by comparing the ratio to the reference to achieve the correct color.



Claim 2

Yamaguchi et al. ('334) discloses a beamsplitter (Fig. 4, Ref. 334) between the positioning and the image means.

Claim 3

Yamaguchi et al. ('334) further discloses collimating (Fig. 4, Ref. 234) said one beam of light.

Claim 4

Yamaguchi et al. ('334) further discloses focusing (Fig. 4, Ref. 311) said reflection of said target portion on said photosensitive surface (Fig. 4, Ref. 332).

Claim 16

Yamaguchi et al. ('334) discloses the target coating is applied over surface of an automotive body (Col. 1, lines 10-14).

Claim 17

Yamaguchi et al. ('334) discloses directing one beam of light (Fig. 4, Ref. 211) at a preset intensity towards a target portion of said target coating (Fig. 4, Ref. 1); directing a reflection (Fig. 4, Ref. 34) of said portion to a photosensitive surface (Fig. 4, Ref. 332) to capture a target image of said target portion (Fig. 4, Ref. 1); measuring characteristics (Fig. 4, Ref. 42) of said unknown metallic flakes in said target image at said preset intensity; and displaying (Fig. 4, Ref. 45) said identified one or more known metal flakes that match said characteristics of said unknown metallic flakes (Col. 9-10, lines 65-2).

Yamaguchi et al. ('334) substantially teaches the claimed invention except that it does not show the target image to stored characteristics of known metallic flakes at said preset intensity to identify one or more said known metal flakes that match said characteristics of said unknown metallic flakes. Nakazono ('642) shows that it is known to provide a target image to stored characteristics of known metallic flakes at said preset intensity to identify one or more said

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known metal flakes that match said characteristics of said unknown metallic flakes (Col. 5, lines 16-65) for a method of determining color tone of a coating. It would have been obvious to combine the device of Yamaguchi et al. ('334) with the means of correlating of Nakazono ('642) for the purpose of providing a ratio that can be compared to a reference, therefore increasing the accuracy of the measurement by comparing the ratio to the reference to achieve the correct color.

Claim 18

Yamaguchi et al. ('334) discloses repeating at other preset intensities (Fig. 4, Ref. 232, 221).

Claim 19

The reference of Yamaguchi et al. ('334) further discloses repeating at other target portions of said target coating (Col. 5, lines 25-44).

Claim 20

Yamaguchi et al. ('334) further discloses the target coating comprises additives (Col. 4, lines 9-14).

Claim 21

The reference of Yamaguchi et al. ('334) further discloses the pigments comprise light reflecting pigments (Col. 4, lines 9-14).

Claim 22

Yamaguchi et al. ('334) discloses the target coating is applied over surface of an automotive body (Col. 1, lines 10-14).

Claim 23

Yamaguchi et al. ('334) discloses sequentially directing one or more beams (Fig. 4, Ref. 232, 2111) of light at least two preset intensities towards a target portion of said target coating

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(Fig. 4, Ref. 1); directing a reflection (Fig. 4, Ref. 34) of said portion to a photosensitive surface (Fig. 4, Ref. 332) to sequentially capture target images of said target portion at said preset intensities (See Fig. 4); sequentially measuring characteristics (Fig. 4, Ref. 42) of said unknown metallic flakes in said target images (Fig. 4, Ref. 1); and displaying (Fig. 4, Ref. 45) said identified one or more known metal flakes that match said characteristics of said unknown metallic flakes (Col. 9-10, lines 65-2).

Yamaguchi et al. ('334) substantially teaches the claimed invention except that it does not show an means for correlating the characteristics of the unknown metallic flakes in the target image to stored known metallic flakes at the preset intensity that match characteristics of the unknown metallic flakes. Nakazono ('642) shows that it is known to provide means for correlating said characteristics of said unknown metallic flakes in said target image to stored characteristics of known metallic flakes at said preset intensity to identify one or more said known metal flakes that match said characteristics of said unknown metallic flakes (Col. 5, lines 16-65) for a method of determining color tone of a coating. It would have been obvious to combine the device of Yamaguchi et al. ('334) with the means of correlating of Nakazono ('642) for the purpose of providing a ratio that can be compared to a reference, therefore increasing the accuracy of the measurement by comparing the ratio to the reference to achieve the correct color.

Claim 25

Yamaguchi et al. ('334) further discloses the beam is collimated (Fig. 4, Ref. 234).

Claim 26

Yamaguchi et al. ('334) discloses the beam is directed at an angle normal to said target portion (See Fig. 4).

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Claim 27

The reference of Yamaguchi et al. ('334) further discloses the photosensitive surface is a charged couple device sensor of an imaging device that captures said target image (Col. 9, lines 25-55).

Claim 40

Yamaguchi et al. ('334) discloses the target coating is additives (Col. 4, lines 3-15).

Claim 41

Yamaguchi et al. ('334) further discloses the pigments are light reflecting (Col. 4, lines 3-15).

Claim 42

Yamaguchi et al. ('334) further discloses the present intensities are fixed at three illumination levels (Fig. 4, Ref. 232, 211, 221).

Claim 44

The reference of Yamaguchi et al. ('334) further discloses the photosensitive surface is a charged couple device sensor of an imaging device that captures said target image (Col. 9, lines 25-55).

Allowable Subject Matter

3. Claims 51, 52 are allowed over the prior art of record.
4. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 51, the prior art fails to disclose or make obvious a method for characterizing a target coating containing unknown metallic flakes having the step of directing a

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reflection of said coated surface to a photosensitive surface to sequentially capture images in a gray scale of said target portion a said preset intensities at said three preset intensities; sequentially measuring characteristics of said unknown metallic flakes in said target images; correlating said characteristics of said unknown metallic flakes in said target images to benchmark characteristics of known metallic flakes at said preset intensities to identify three said known metal flakes that match said characteristics of said unknown metallic flakes; displaying said identified one or more known metal flakes that match said characteristics of said unknown metallic flakes, and in combination with the other recited limitations of claim 51.

Regarding claim 52, the prior art fails to disclose or make obvious a method for producing a metallic flake containing composition, wherein a coating therefrom matches characteristics of a target coating containing unknown metallic flakes having the step of preparing one or more test coating compositions containing said identified known metal flakes; applying said test coating compositions over test substrates to produce test coatings thereon comparing said test coatings against said target coating to select test coating having characteristics that match said characteristics of said target coating; and selecting test coating composition that produces said matched test coating, and in combination with the other recited limitations of claim 52.

5. Claims 5-15, 24, 28-39, 43, 45-50 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

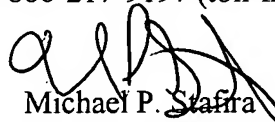
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Stafira whose telephone number is 571-272-2430.

The examiner can normally be reached on 4/10 Schedule Mon.-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Michael P. Stafira
Primary Examiner
Art Unit 2877

December 14, 2004